

Appl. No. 10/791038
Reply to Action dated 5/25/2006
Page 6

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REMARKS

Reconsideration and reexamination of the application are requested. The specification has been amended to correct typographical errors. Claims 1, 5 and 7 have been amended. Claims 8-11 have been added. Claims 1-11 are pending.

Specification objection

The specification is objected to due to a typographical error on page 7, line 15. The specification has been amended to correct the error. Other typographical errors noted by Applicant have also been corrected.

Claim objection

Claim 5 is objected to due to a typographical error. Claim 5 has been amended in the manner suggested by the Examiner.

Claim Rejections – 35 USC 103

Claims 1-6 are rejected under 35 USC 103(a) as being unpatentable over Stopczynski (US 2003/0149530) in view of Trajkovic et al. (US 2003/0112132).

In addition, claim 7 is rejected under 35 USC 103(a) as being unpatentable over Stopczynski (US 2003/0149530) in view of Trajkovic et al. (US 2003/0112132) and further in view of Hamada et al. (US 6,938,715).

Stopczynski, Trajkovic, and Hamada do not teach or suggest an apparatus for a vehicle for protection of a colliding object as recited in claim 1 or claim 7. For example, these references do not teach or suggest a monitor that displays the image taken by the camera simultaneously with deployment of the air bag.

As described at page 3, lines 12-16 of the specification, the air bag is deployed on the hood or the outside of the windshield when a collision is predicted or detected. Simultaneously, a forward image of the vehicle is taken and displayed on the monitor. As a result, even if the deployed air bag occupies the windshield and blocks the driver's view, the image displayed on the monitor can provide the forward view for the driver. Page 3, lines 16-19. This eliminates restrictions on the size of the air bag, thereby

Appl. No. 10/791038
Reply to Action dated 5/25/2006
Page 7

enabling an increase in the size of the air bag, so that the performance of the air bag in terms of cushion can be enhanced. Page 3, lines 19-21. Therefore, the effectiveness of the air bag in absorbing the impulsive force acting on the colliding object can be increased. Page 3, lines 21-23.

Stopczynski, Trajkovic, and Hamada do not teach or disclose the claimed feature relating to the timing between the deployment of the air bag and the monitor displaying the forward image.

Stopczynski is characterized as disclosing a hood air bag and a camera, with reference to paragraphs [0035] and [0036]. Stopczynski does not disclose that the indicator 30 displays an image taken by a camera simultaneously with deployment of the air bag. It is noted that Stopczynski simply discloses air bag deployment as one example of a passive countermeasure, and a video system and head-up display as examples of indicators. Stopczynski does not explicitly disclose that air bag deployment is coupled with displaying an image on a monitor. Further, Stopczynski does not disclose the simultaneous operation of air bag deployment and image display. The indicator 30 could operate before or after deployment of the air bag. In fact, Stopczynski explicitly refers to "other pre and post collision information" implying that the information is pre or post air bag deployment. Paragraph [0036], last line.

Further, Stopczynski does not indicate that the image taken by a camera is displayed on the monitor when the monitor receives one of a precautionary signal and a collision signal. Paragraph [0026] discusses operation of a sensor fusion 14 that can include cameras, and that a surroundings status signal can include a camera scene. Paragraph [0036] discusses an indicator which generates a warning signal to the driver. However, there is no disclosure in Stopczynski that an image taken by a camera is actually displayed when a precautionary signal or a collision signal are received. In fact, the list of information discussed in paragraph [0036] as being generated on indicator 30 does not include displaying an image taken by a camera. It is noted that the sensor fusion 14 is used to determine the threat of a collision, and there is no disclosure that a camera image from the sensor fusion 14 is provided to the indicator 30. Nor does Stopczynski

Appl. No. 10/791038
Reply to Action dated 5/25/2006
Page 8

disclose a need for displaying such an image, as there is no disclosure that the air bag in Stopczynski in any way blocks the view of the driver upon deployment.

In addition, even though Stopczynski mentions a camera, Stopczynski does not explicitly disclose that the camera is positioned for taking a forward image of the vehicle. The cameras in Stopczynski could be rearward facing or side facing and still perform the functions disclosed by Stopczynski, namely generating a surroundings status signal for use in collision probability estimations (paragraph [0026], lines 8-13). There is no teaching that they take a forward image as recited in claims 1 and 7.

Trajkovic and Hamada do not remedy the deficiencies of Stopczynski. Trajkovic does not disclose an air bag. Trajkovic discloses a head up display for a vehicle. There is no disclosure in Trajkovic of deployment of an air bag and simultaneously displaying an image.

Hamada discloses air bag devices 18, 24, 80, 82 (column 3, lines 64-67 and column 6, lines 25-29). The air bag devices 18, 24 are mounted underneath the hood on an apron member 28 and are used as lifters for lifting the hood (column 3, lines 53-63). Hamada does not disclose deployment of an air bag and simultaneously displaying an image.

Furthermore, with respect to claim 7, Stopczynski, Trajkovic, and Hamada do not disclose an air bag which deploys on an outside of a windshield of the vehicle when the collision is either predicted by the collision prediction module or detected by the collision detection module and which elevates a hood skin. As recognized in the rejection, Stopczynski and Trajkovic do not teach or suggest this feature. Hamada discloses an air bag 82 that deploys on an outside of a windshield (column 6, lines 25-29). However, there is no disclosure that the air bag 82 also elevates the hood. Hamada actually provides auxiliary air bag bodies 84 in addition to the air bags 82 that lift the rear of the hood (column 6, lines 28-29). Therefore, the air bag 82 in Hamada that deploys on an outside of the windshield does not also elevate the hood. Therefore, none of the references teach or suggest an air bag that both deploys on an outside of a windshield and which elevates a hood skin.

Appl. No. 10/791038
Reply to Action dated 5/25/2006
Page 9

For at least these reasons, claims 1 and 7 are patentable over Stopczynski, Trajkovic, and Hamada. Claims 2-6 depend from claim 1 and are patentable therewith and need not be separately distinguished. Applicants do not concede the propriety of the rejections to claims 2-6.

New claims 8-9 and 10-11 depend from claims 1 and 7, respectively, and are patentable therewith.

Conclusion

In view of the above, early issuance of a notice of allowance is solicited. Any questions regarding this communication can be directed to the undersigned attorney, Curtis B. Hamre, Reg. No. 29,165 at (612) 455-3802.

Respectfully submitted,

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